Engineering Drawing 1
5315

GENERAL CERTIFICATE OF EDUCATION BOARD

Technical and Vocational Education Examination

JUNE 2025 **INTERMEDIATE LEVEL**

Specialty Name and Acronym	**ELECTRICAL SPECIALTIES: EPS, ELN AND HVAC**
Centre Number	
Centre Name	
Candidate Identification Number	
Candidate Name	

Mobile phones are **NOT** allowed in the examination room.

5315 ENGINEERING DRAWING 1: Multiple Choice Question Paper

Duration: One and a Half Hours

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the examination begins:

3. Check that this question booklet is headed "**Intermediate Level – 5315 ENGINEERING DRAWING 1.**
4. Fill in the information required in the spaces above.
5. Fill in the information required in the spaces provided on the answer sheet using your HB pencil:

   Candidate Name, Exam Session, Subject Code and Candidate Identification Number.

   Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.

How to answer the questions in this examination:

6. Answer **ALL** the **50** questions in this Examination. All questions carry equal marks.
7. Non-programmable calculators are allowed.
8. Each question has FOUR suggested answers: **A, B, C** and **D**. Decide which answer is appropriate. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.

   For example, if **C** is your correct answer, mark **C** as shown below:

   [A] [B] [~~C~~] [D]

9. Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.
10. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to this question later.
11. Do all rough work in this booklet, using the blank spaces in the question booklet.
12. **At the end of the examination the invigilator shall collect the answer sheet first and then the question booklet.**
    DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.

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1. B grade pencils are used for
   A lettering
   B dimension lines
   C outlines of drawing
   D section lines

2. The meaning of ISO in Technical drawing is
   A International System Organisation
   B International Organisation for Standardisation
   C Imperial System Organisation
   D Isometric System Organisation

3. Identify the portion labeled **B** on the drawing paper layout in Figure 1 below.

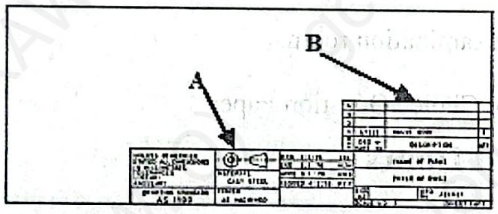


Figure 1

   A Parts list
   B Metric reference portion
   C Grid reference border
   D Title block

4. Figure 2 below shows a drawing instrument graduated in

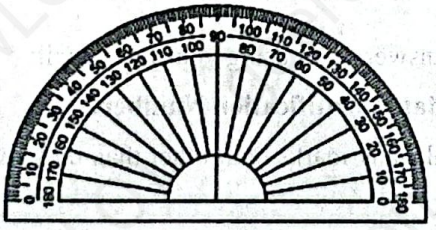


Figure 2

   A millimetres
   B degrees
   C meters
   D SI Units

5. A set square is used in Technical drawing to draw the
   A only inclined lines
   B horizontal and inclined lines
   C vertical and horizontal lines
   D vertical and inclined lines

6. An A4 drawing paper is placed vertically. Indicate the dimension x in figure 3 below.

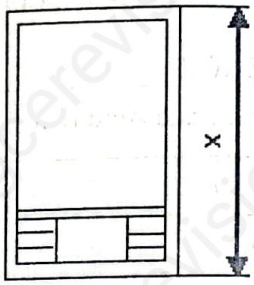


Figure 3

   A 597
   B 420
   C 210
   D 297

7. Calculate the distance X of the A4H paper in figure 4 below

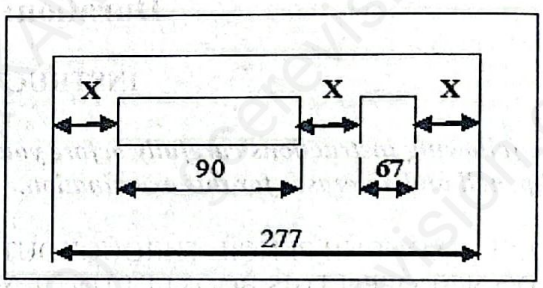


Figure 4

   A 120
   B 30
   C 23
   D 40

8. In the inclined lettering represented in figure 5 below, what is the value of the angle α.

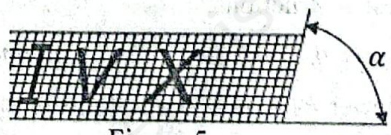


Figure 5

   A 15°
   B 30°
   C 75°
   D 95°

9. Which one of the following is not an important requirement for lettering?
   A Ease of execution
   B Legibility
   C Reproducibility
   D Style

10. Identify the type of line shown in Figure 6 below.

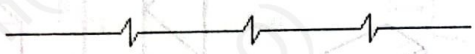


Figure 6

A Continuous thin line
B Continuous thin with zigzag line
C Long break line
D Continuous thick with zigzag line

11. The line labelled L1 in figure 7 below is used as a/an

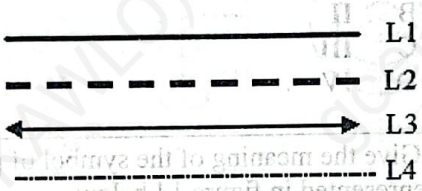


Figure 7

A dimension line
B centre line
C object outline
D hidden feature line

12. A drawing executed to a scale of 1:2 is described as

A reduction scale
B enlargement scale
C full size scale
D real scale

13. A length of 10m of an object is represented by 10mm on the paper, the scale of representation is

A 1:1
B 1:10
C 1:100
D 1:1000

14. Viewed from the point P, in figure 8 below, the image ABCD of the object EFGH is said to be

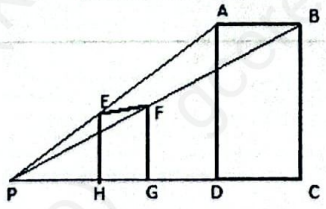


Figure 8

A enlarged
B reduced
C stretched
D translated

15. In the dimensioning shown in figure 9 below, choose the name referring to D2.

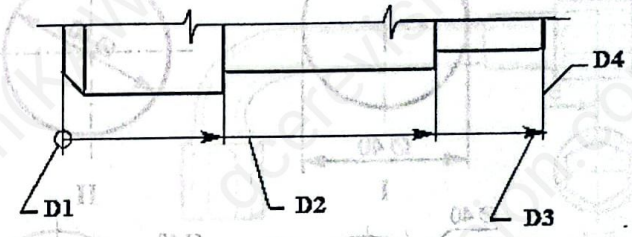


Figure 9

A Termination
B Projection line
C Dimension line
D Origin indication

16. Select the type of arrangement of dimensions used in the figure 10 below

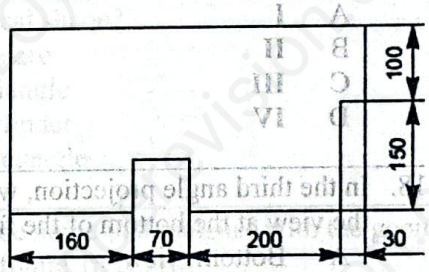
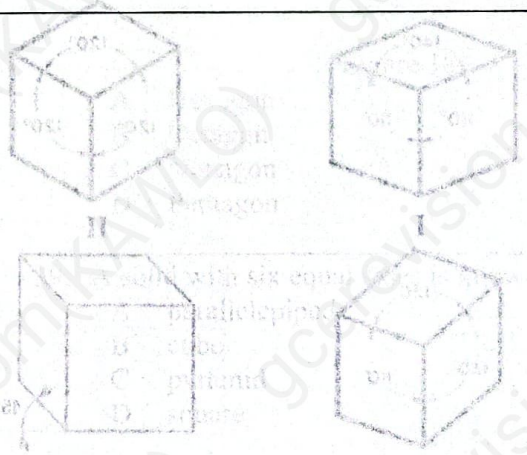


Figure 10

A Combined dimensions
B Chain dimensions
C Parallel dimensions
D Super imposed running dimensions



17. Which of the following does not match with the principles of dimensioning a diameter in figure 11 below?

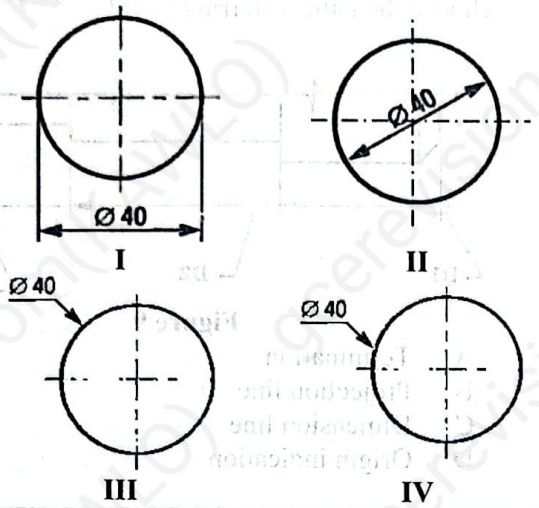


Figure 11

A I
B II
C III
D IV

18. In the third angle projection, what is the name of the view at the bottom of the front view?
A Bottom view
B Top view
C Right side view
D Left side view

19. Which of the following boxes drawn in figure 12 below is in isometric projection?

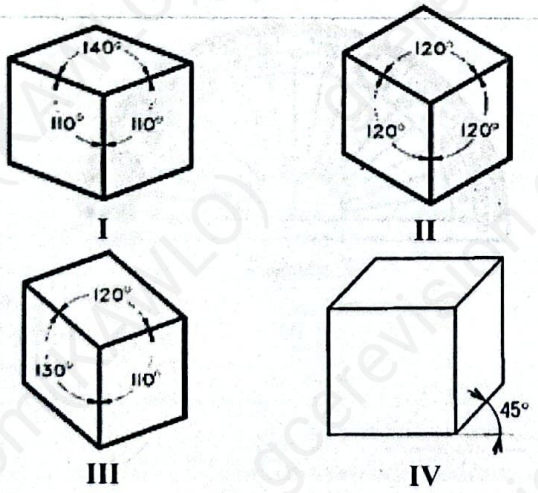


Figure 12

A I
B II
C III
D IV

20. Identify the top view among the list of views in Figure 13 below.

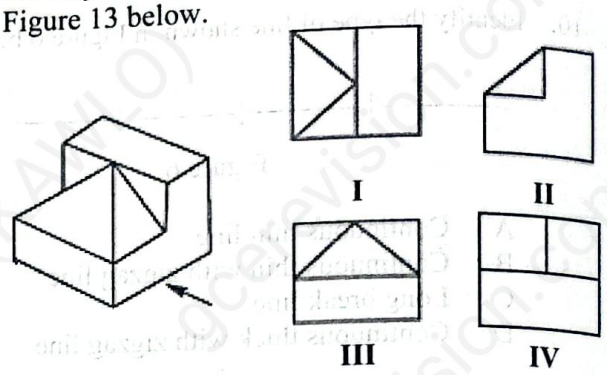


Figure 13

A I
B II
C III
D IV

21. Give the meaning of the symbol of projection represented in figure 14 below.

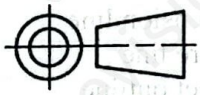


Figure 14

A Isometric projection
B Orthographic projection
C First angle projection
D Third angle projection

22. What is the angle of projection with respect to the horizontal line in cavalier projection?
A 15°
B 30°
C 45°
D 60°

23. Sectional views are used to show
A hidden details clearly.
B clear details
C outline details
D visible line details

24. Choose the correct representation of the section view **B - B** with respect to the object among the drawings in figure 15 below,.

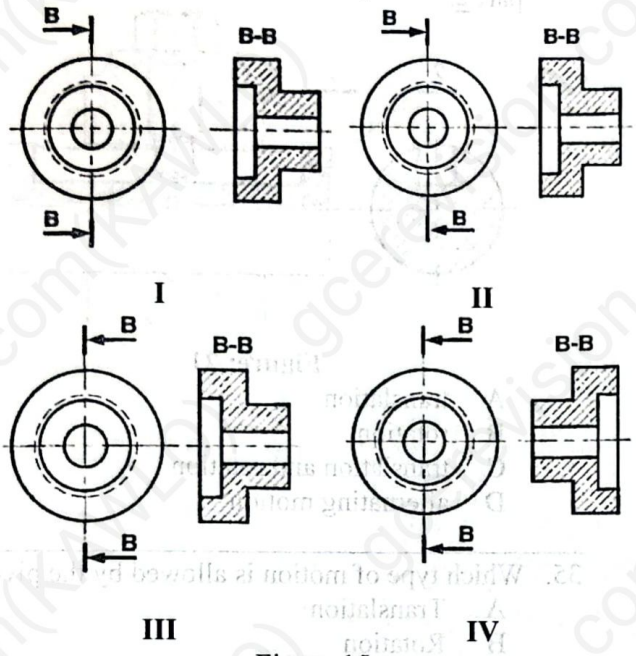


Figure 15

A I
B II
C III
D IV

25. Considering the hatched lines in figure 16 below and select the material used

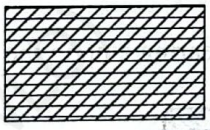


Figure 16

A Copper and alloys
B Rubber material
C Steel and ferrous metals
D Aluminium and alloys

26. Specify the type of section shown in figure 17 below.

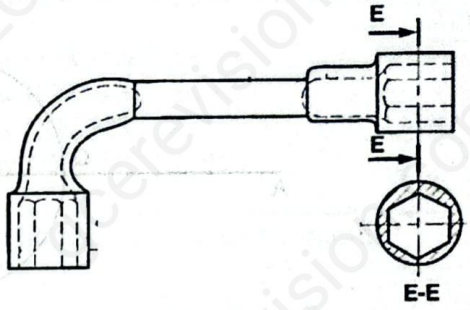


Figure 17

A Revolved section
B Partial section
C Local section
D Removed section

27. Which of the names below represents a geometrical shape?

A Square
B Triangle
C Cylinder
D Rectangle

28. Choose the name that matches with the geometric shape in figure 18 below.

Figure 18

A Hexagon
B Octagon
C Nonagon
D Pentagon

29. A solid with six equal sides is known as a

A parallelepiped
B cube
C pyramid
D square

30. In a triangle, the sum of the angles at the summits is

A 90°
B 120°
C 180°
D 360°

31. In figure 19 below, which of the following construction line is drawn first to have the bisector AB and DC?

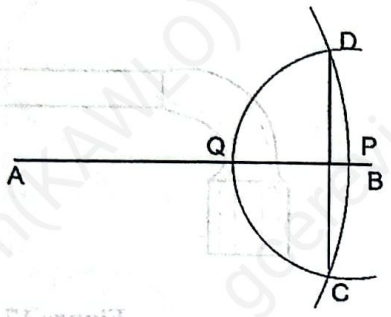


Figure: 19

A Line AP
B Arc DQC
C Arc DPC
D Line DC

32. The conventional diagram in figure 20 below is that of a

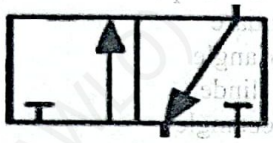


Figure 20

A 5/2 Distributor
B 4/2 Distributor
C 2/2 Distributor
D 3/2 Distributor

33. Identify a countersink hole in figure 20 below

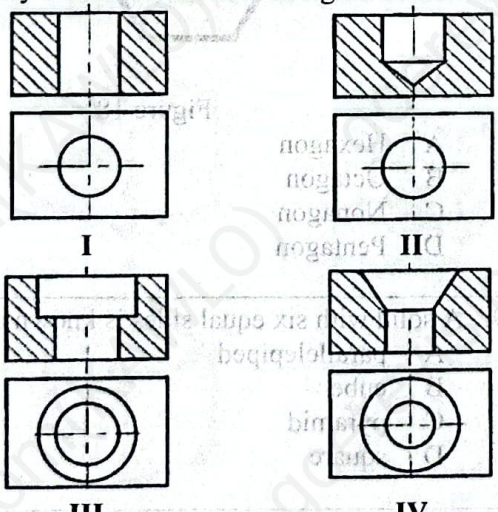


Figure 20

A **I**
B **II**
C **III**
D **IV**

34. Referring to the assembly drawing in figure 21 below, part **1** is guided in ——— with respect to part **2**.

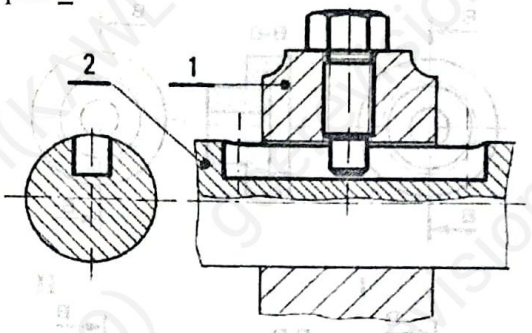


Figure: 21

A translation
B rotation
C translation and rotation
D alternating motion

35. Which type of motion is allowed by the pivot link?

A Translation
B Rotation
C Translation and rotation
D No motion

36. State the function of a bearing.

A Guide in rotation
B Guide in translation
C Guide in rotation and prevent friction
D Guide in translation and prevent friction

37. Choose a ball bearing among the bearings in figure 22 below.

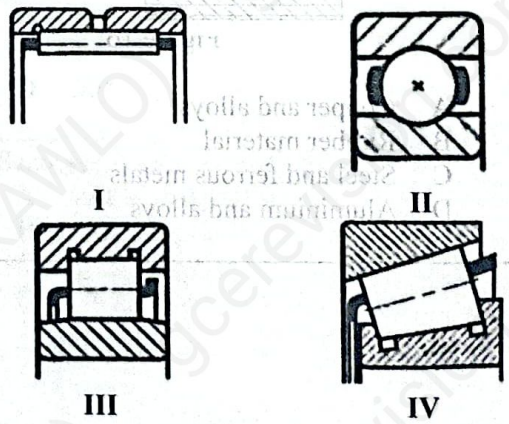


Figure 22

A **I**
B **II**
C **III**
D **IV**

38. Given a fit: Ø50H7g6, what is the significance of H7?

A Tolerance position
B Tolerance grade
C Shaft tolerance
D Hole tolerance

39. Considering the following hole tolerance: $O65H9 = 65\ ^{+0.074}_{0}$, the interval of tolerance is

A + 0.074 mm
B − 0.074 mm
C − 0.74 mm
D +0.74 mm

40. Motions are permitted in ——— type of fit

A force
B tight
C Pressured
D Clearance

41. Referring to the threaded fastener in figure 23 below , L and Lt represent

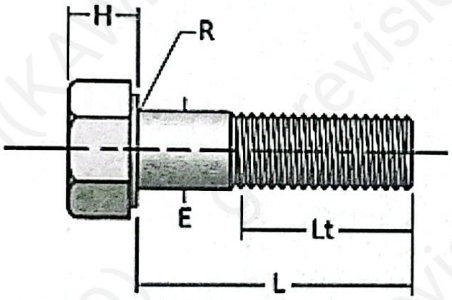


Figure: 23

A Total screw length and thread length
B Total length and pitch of the screw
C Total length and grip length
D Grip length and thread length

42. Select an hexagonal nut among the nuts in figure 24 below.

I **II** **III** **IV**

Figure 24

A **I**
B **II**
C **III**
D **IV**

43. If a cylindrical socket head screw has a metric thread, with nominal diameter 10, total length 40 and threaded length 35 what will be its standard designation?

A Screw Q M10 40 - 35
B Screw H M10 40 - 35
C Screw CHC M10 40 - 35
D Screw FBS M10 40 - 35

44. Indicate the cylindrical pin among the pins in figure 25 below.

I **II** **III** **IV**

Figure 25

A **I**
B **II**
C **III**
D **IV**

45. In the standard designation of a parallel key 5×5× 40, what does 5×5 stand for?

A Cross section
B Width and thickness
C Cross section dimensions
D Length

Questions 46 and 47 refer to the assembly drawing in figure 26 below.

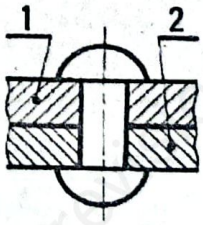


Figure: 26

46. Specify the type of link between 1 and 2

A Pivot link
B Sliding link
C Pivot sliding link
D Embedded link

47. Give the characteristics of the link between 1 and 2

A Complete- elastic - dismountable
B Complete- elastic - permanent
C Complete- rigid - permanent
D Complete- rigid - dismountable

48. A link established between two parts 1 and 2 with a bolt is

A complete- elastic - dismountable
B complete- elastic - permanent
C complete- rigid - permanent
D complete- rigid - dismountable

49. Select a mechanical tools not used by electricians in figure 27 below.

Figure 27

A 1
B 2
C 3
D 4

50. Identify the type of power transmission in figure 28 below.

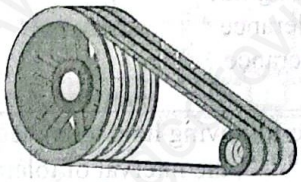


Figure: 28

A Simple Pulley and belt drive
B Chain drive
C Chain and sprocket drive
D multi grooves pulley and belt drive

STOP

GO BACK AND CHECK YOUR WORK